

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit No. AQ0214MSS01
Rescinds Permit No. 0025-AC003

Final – March 6, 2008

PAL Effective Date:

Section 4 is Effective – March 6, 2008

Section 6 is Effective – March 6, 2008

Section 7 is Effective – March 6, 2008

Section 8 is Effective – March 6, 2008

PAL Expiration Date:

Section 4 Expires – March 6, 2018

Section 6 Expires – March 6, 2018

Section 7 Expires – March 6, 2018

Section 8 Expires – March 6, 2018

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit No. AQ0214MSS01 to the Permittee listed below.

Permittee: Nushagak Cooperative
P.O. Box 350
Dillingham, AK 99576
(907) 842-5251

Owner: Same as Permittee

Stationary Source: Dillingham Power Plant

Project: PLANTWIDE APPLICABILITY LIMITATIONS (PALS) FOR
NO_x, CO, PM, AND SO₂

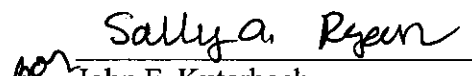
Location: UTM (Zone 4) Northing: 6544.894; Easting 530.614

Physical Address: 557 Kenny Wren Road, P.O. Box 350
Dillingham, Alaska 99576

Source Contact: James A. Thames
(907) 842-5251

Billing Contact: James A. Thames
(907) 842-5251

This project is classified under 18 AAC 50.508(6) and 18 AAC 50.508(3). The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50. This Permittee is authorized to operate under the terms and conditions of this permit upon issuance, and as described in the original permit application, except as otherwise specified in this permit.



John F. Kuterbach
Manager, Air Permits Program

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Section 1 Emission Unit Inventory

1. **Installation and Operation Authorization.** The Permittee is authorized to install and operate the emission units listed in Table 1. This table contains the initial emission unit inventory at the start of the PAL's effective period, it is included for descriptive purposes only, and the Permittee is not restricted to the contents of Table 1 for the effective period of the PAL.

Table 1 –Emission Unit Inventory

Emission Unit No.	Equipment Type	Make	Model	Capacity
3	Diesel Electric Generator	White Superior	405X8	350 kW-e
5	Diesel Electric Generator	White Superior	40V5X-12	750 kW-e
6	Diesel Electric Generator	White Superior	40VX-16	1,000 kW-e
10	Diesel Engine	Caterpillar	3516DI	1,135 kW-e
11	Diesel Engine	Caterpillar	3512B	1,050 kW-e
12	Diesel Engine	Caterpillar	3512B	1,050 kW-e
13	Diesel Engine	Caterpillar	3512B	1,050 kW-e
14	Diesel Engine	Caterpillar	3512C	1,050 kW-e
15	Diesel Engine	Caterpillar	3512C	1,050 kW-e

2. **Maintenance.** The Permittee shall maintain equipment according to manufacturer's or operator's maintenance procedures.

Section 2 State Emission Standards

3. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from the fuel burning emission unit listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.
 - 3.1 Perform a visible emissions observation on Emission Units 14 and 15 within 30 days of the first time the emission unit operates, using Method 9 as described in Condition 111.1;
 - 3.2 If the Permittee installs new emission units, not covered in the initial emission unit inventory in Table 1, a Method 9 visible emissions observation shall be performed within 30 days of the first time the emission unit operates.
 - 3.3 Record and report on the findings of the Method 9 visible emissions observation to the Department in the operating report, under Condition 101 of this minor permit.
4. **Particulate Matter (PM).** The Permittee shall not cause or allow PM emitted from the fuel burning emission units listed in Table 1 to exceed 0.05 grains per cubic foot (gr./dscf) of exhaust gas corrected to standard conditions and averaged over three hours.
 - 4.1 If the Permittee installs new emission units, not covered in the initial emission unit inventory in Table 1, the Permittee shall perform a demonstration that the new emission unit complies with the standard.
 - 4.2 The Permittee shall report the findings of the demonstrations to the Department in the operating report, under Condition 101 of this minor permit.
5. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as Sulfur Dioxide (SO₂), from the fuel burning emission units listed in Table 1 to exceed 500 parts per million averaged over three hours. Compliance will be demonstrated by complying with Condition 6.1.
 - 5.1 If the Permittee installs new emission units, not covered in the initial emission unit inventory in Table 1, the Permittee shall provide a demonstration to the department that the new emission unit complies with the standard.
 - 5.2 The Permittee shall report the findings of the demonstrations to the Department in the operating report, under Condition 101 of this minor permit.

Section 3 Ambient Standards and Increment Protection

6. For ambient air quality protection, the Permittee shall
 - 6.1 limit the maximum sulfur content of fuel oil to less than 0.5 weight percent sulfur (wt%S). Monitor, record, and report per Conditions 79 through 87;
 - 6.2 comply with annual NO_x limit in Condition 8;
 - 6.3 maintain a minimum stack height of 16.6 meters above ground level, for all emission units; and
 - 6.4 maintain all emission units listed in Table 1 with vertical uncapped stacks. This condition does not preclude the use of flapper valve rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.

Section 4 Best Available Control Technology (BACT) for NO_x

This section of the permit contains the requirements for NO_x BACT imposed by Construction Permit No. 0025-AC003 for Emission Units Nos. 11 through 13.

7. **Nitrogen Dioxide Requirements.** The Permittee shall comply with the following requirements:
 - 7.1 For the 1,050 kW-e Caterpillar 3512B diesel electric generators, Emission Units Nos. 11 through 13:
 - a. Limit NO_x emissions to no greater than 24.9 lb/hr per engine, expressed as NO₂, averaged over the duration of the emission performance test or any three consecutive hours.
 - b. Operate Emission Units Nos. 11 through 13 with a separate aftercooler loop and electronic controls set for low emission strategy.
 - c. No less than once per calendar year, verify that electronic controls are set for low emission strategy as required by Condition 7.1b. Submit verification in the operating report required by Condition 101.

Section 5 Oxides of Nitrogen (NO_x) Plantwide Applicability Limitation (PAL)

PAL Limit

8. The Permittee shall limit the stationary source wide NO_x emissions to less than 363.6 tons on a 12-month rolling average, rolled monthly.

Emissions from Startup, Shutdown and Malfunction

9. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the NO_x PAL limit established in Condition 8. In addition to including the emissions in the calculations the Permittee shall:
 - 9.1 record the date and duration of the deviation from normal operation; and
 - 9.2 report in the operating report, required by Condition 101, the date and duration of the deviation from normal operation.

Initial Emission Factor Validation Requirements

10. The Permittee shall:
 - 10.1 for Emission Units 3 and 10:
 - a. source test each emission unit subject to the NO_x PAL or a representative emission unit for a group of emission units established under Condition 12, within six months of the effective date of the NO_x PAL;
 - b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;
 - c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or
 - d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the NO_x PAL;
 - 10.2 for Emission Units 5 and 6:
 - a. source test each emission unit subject to the NO_x PAL or a representative emission unit for a group of emission units established under Condition 12, within six months of the effective date of the NO_x PAL;
 - b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;
 - c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or

- d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the NO_x PAL;

10.3 for Emission Units 11 through 13:

- a. source test Emission Unit 12, which is the representative emission unit for this test, within six months of the effective date of this NO_x PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;

10.4 for Emission Units 14 and 15:

- a. source test which ever emission unit begins operation first, within six months of the first time the emission unit operates. The emission unit tested shall be the representative emission unit for this source test;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;

10.5 use methods contained in Section 13 to conduct the source test; and

10.6 use the results of the source test to revise the worst-case NO_x emission factor in lbs/kWh, used in Condition 16 by the methods contained in Condition 18.

Ongoing Emission Factor Re-Validation Requirements

11. The Permittee shall:

- 11.1 source test each emission unit subject to the NO_x PAL or a representative emission unit for a group of emission units established under Condition 12, 13, or 14, at least once every five years, from the last source test performed under this PAL;
 - a. for the grouping established under Condition 13, source test Emission Unit 13;
 - b. for the grouping established under Condition 14, source test whichever emission unit that was not source test in the previous test, and this emission unit shall be the representative emission unit for this source test;
- 11.2 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;
- 11.3 use methods contained in Section 13 to conduct the source test; and
- 11.4 use the results of the source test to revise the NO_x emission factor in lbs/kWh, used in Condition 16, by the methods contained in Condition 19.

Emission Unit Groupings

12. If the Permittee wishes to establish groupings or multiple groupings of emission units with a representative emission unit for each grouping, the Permittee shall accomplish the following:
 - 12.1 submit a request to the department, no later than three months prior to the required source testing under either Condition 10 or Condition 11. The request shall identify the requested groupings and their representative emission unit;
 - 12.2 submit a certification from a company official, with the request under Condition 12.1, that each grouping and representative emission unit:
 - a. have the same horsepower rating and engine model;
 - b. have an identical generator size that they are driving;
 - c. have the same configuration; and
 - 12.3 unless the department provides a written objection, within 30-days of receiving the request, the groupings are considered effective.
13. Emission Units 11 through 13 are established as a grouping as of the effective date of the PAL.
14. Emission Units 14 and 15 are established as a grouping as of the effective date of the PAL.
15. All emission units that are not contained in a grouping, established under either Condition 12, 13, or 14, shall be tested individually.

Calculation Methodology

16. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the NO_x emissions, for each emission unit subject to the NO_x PAL, for the previous calendar month, using Equation 1 and as follows:

Equation 1 $NO_x = EF \times kWh \left(\frac{1 \text{ ton}}{2000 \text{ lb}} \right)$

Where: NO_x = NO_x emissions in tons per month for all emission units
 kWh = a given emission units monthly kilowatt hours
 EF = Department approved emission factor as described in condition 17 through 19, 20.1c, 21, and 22 for a given emission unit

- 16.1 for each month during the first 12-months from the NO_x PAL effective date, add the previous calendar month NO_x emissions to the sum of the all previous months NO_x emissions from the NO_x PAL effective date. If the NO_x value calculated exceeds the NO_x limit contained in Condition 8, the Permittee shall report as a permit deviation per conditions 90 and 100.
- 16.2 for each month during the NO_x PAL effective period after the first 12-months of establishing the NO_x PAL, add the previous months NO_x emissions to the

preceding 11-months NO_x emissions to get the rolling 12-month total. If the NO_x value calculated exceeds the NO_x limit contained in Condition 8, the Permittee shall report as a permit deviation per conditions 90 and 100.

NO_x Emission Factors

17. Until a unit-specific source test has been conducted in accordance with Condition 10 and approved in accordance with Condition 18, use the department approved NO_x emission factors contained in Table 2 to calculate NO_x emissions under Condition 16.
18. Within 90-days after completing the required validation source testing under Condition 10, the Permittee shall submit the resulting worst case NO_x emission factor for department approval.
 - 18.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
 - 18.2 If the emission factor is accepted, it shall:
 - a. rescind and replace the emission factor contained in Table 2; and
 - b. be used by the Permittee in the calculations required under Condition 16, to demonstrate compliance with the NO_x PAL for the full calendar month the approval is received in, forward.
 - 18.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the emission factor in Table 2 in the compliance demonstration calculations under Condition 16.
19. Within 90-days after completing a required re-validation source test under Condition 11, the Permittee shall submit the resulting worst case NO_x emission factor, obtained under Condition 11, for department approval.
 - 19.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
 - 19.2 If the emission factor obtained from source testing is accepted, it shall:
 - a. rescind and replace the NO_x emission factor that is currently in place to demonstrate compliance with the NO_x PAL;
 - b. be used by the Permittee to demonstrate compliance with the NO_x PAL under Condition 16 for the full calendar month of the approval forward; and
 - c. remain in effect until it is rescinded and replaced by a site specific NO_x emission factor that is established through source testing.
 - 19.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last department approved emission factor when performing the calculations under Condition 16, for the monthly compliance demonstration.

Table 2 – Department Approved NO_x Emission Factors

Emission Unit	Approved NO _x Emission Factor ^b (lbs/Kwh)
3 ^a	0.0438
5 ^a	0.0339
6 ^a	0.0339
10 ^c	0.0356
11 ^c	0.0230
12 ^c	0.0230
13 ^c	0.0230
14 ^c	0.0192
15 ^c	0.0192

Table Notes:

a - Emission Unit 3, 5, and 6 are significant emission units, under 40 CFR 52.21(aa)(12)(vi)(c) allows source testing for significant emission units to verify the emission factor.

b - Emission Factor in pounds per kilowatt hour shall be used to show compliance with the PAL

c – Under authority of 40 CFR 52.21(aa)(7)(x) the Department may implement any requirements necessary to implement and enforce the PAL, thus source testing for all major emission units to verify the emission factor used to comply with the PAL.

Emission Unit or Related Equipment Addition or Replacement Requirements

20. If the Permittee adds a new emission unit, replaces an emission unit, or replaces an emission unit's generator, the Permittee shall:

20.1 notify the Department of the:

- make, model and size of the new emission unit and of the emission unit being replaced or the new emission unit being added to the stationary source;
- make, model and size of the new generator and the replaced equipment; and
- emission factor for NO_x, in pounds per kilowatt hour for the new fuel burning equipment.

20.2 use the emission factor provided under Condition 20.1c for the compliance demonstration calculation under Condition 16, until a new emission factor is obtained from source testing under Condition 21.

21. For all new emission units or replacement emission units the Permittee shall:

- source test each emission unit or a representative emission unit for a group of emission units established under Condition 12, within 90-days of initial startup of the emission unit or the first unit of a grouping;

- 21.2 perform a source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis;
 - 21.3 use methods contained in Section 13 to conduct the source test;
 - 21.4 use the results of the source test to revise the NO_x emission factor in lbs/kWh, used in Condition 16, by the methods contained in Condition 19; and
 - 21.5 perform subsequent ongoing validation source testing in accordance with Condition 11.
22. If the Permittee replaces a generator driven by an emissions unit subject to the NO_x PAL, the Permittee shall:
- 22.1 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case NO_x emissions, on a pound of NO_x per Kilowatt hour basis, on that emission unit within 90-days of restarting that emission unit.
 - 22.2 if a site specific source test is required for the generator replacement, the Permittee shall perform subsequent ongoing validation source testing in accordance with Condition 11.
 - 22.3 alternatively, if the replacement generator is the same make, model and rating, a site specific source test is not required.

Monitoring

- 23. For each emission unit that is subject to the NO_x PAL, the Permittee shall monitor the Kilowatt hours of electricity produced, with a meter accurate to within plus or minus one percent. This shall be accomplished monthly (calendar) for the full effective period of this NO_x PAL. The Kilowatt hours shall be read on the last day of each calendar month, and within 3 hours of the last day of the effective period of the PAL.
- 24. If there is a gap in the monitoring data collected for the Kilowatt hours produced for any emissions unit subject to the NO_x PAL, the Permittee shall report as a permit deviation per Conditions 90 and 100.

Recordkeeping

- 25. For each emission unit or group of emission units established under Condition 12, 13, or 14 that are subject to the NO_x PAL, the Permittee shall retain records¹ of the monthly Kilowatt hours of electricity produced, for five calendar years beyond the effective period of this NO_x PAL.
- 26. The Permittee shall retain records of the monthly and 12-month rolling NO_x emissions calculated in Condition 16 for the full effective period of the NO_x PAL and for an additional five calendar years beyond the effective period of this NO_x PAL.
- 27. If there is a gap in the data records maintained by the Permittee for NO_x emissions or for the Kilowatt hours produced for any emissions unit, the Permittee shall report as a permit deviation per Conditions 90 and 100.

¹ The records may be maintained in electronic format

Reporting

28. The Permittee shall report the:
- 28.1 monthly and 12-month rolling Kilowatt hours produced, in the operating report required by Condition 101;
 - 28.2 monthly and 12-month rolling NO_x emissions calculated by Condition 16, in the operating report required by Condition 101; and
 - 28.3 results of all source testing and validation source testing within 60-days after the completion of such test or method.

General PAL Permit Terms and Conditions

29. The Permittee shall comply with Conditions 89 through 93.

Section 6 Carbon Monoxide (CO) PAL

PAL Limit

30. The Permittee shall limit the stationary source wide CO emissions to less than 160.8 tons on a 12-month rolling average, rolled monthly.

Emissions from Startup, Shutdown and Malfunction

31. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the CO PAL limit established in Condition 30. In addition to including the emissions in the calculations the Permittee shall:

- 31.1 record the date and duration of the deviation from normal operation; and
- 31.2 report in the operating report, required by Condition 101, the date and duration of the deviation from normal operation.

Initial Emission Factor Validation Requirements

32. The Permittee shall:

32.1 for Emission Units 3 and 10:

- a. source test each emission unit subject to the CO PAL or a representative emission unit for a group of emission units established under Condition 34, within six months of the effective date of the CO PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;
- c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or
- d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the CO PAL;

32.2 for Emission Units 5 and 6:

- a. source test each emission unit subject to the CO PAL or a representative emission unit for a group of emission units established under Condition 34, within six months of the effective date of the CO PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;
- c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or

- d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the CO PAL;
- 32.3 for Emission Units 11 through 13:
- a. source test Emission Unit 12, which is the representative emission unit for this test, within six months of the effective date of this CO PAL;
 - b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;
- 32.4 for Emission Units 14 and 15:
- a. source test which ever emission unit begins operation first, within six months of the first time the emission unit operates. The emission unit tested shall be the representative emission unit for this source test;
 - b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;
- 32.5 use methods contained in Section 13 to conduct the source test; and
- 32.6 use the results of the source test to revise the worst-case CO emission factor in lbs/kWh, used in Condition 38 by the methods contained in Condition 40.

Ongoing Emission Factor Re-Validation Requirements

33. The Permittee shall:
- 33.1 source test each emission unit subject to the CO PAL or a representative emission unit for a group of emission units established under Condition 34, 35, or 36, at least once every five years, from the last source test performed under this PAL;
- a. for the grouping established under Condition 35, source test Emission Unit 13;
 - b. for the grouping established under Condition 36, source test whichever emission unit that was not source test in the previous test, and this emission unit shall be the representative emission unit for this source test;
- 33.2 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;
- 33.3 use methods contained in Section 13 to conduct the source test; and
- 33.4 use the results of the source test to revise the CO emission factor in lbs/kWh, used in Condition 38, by the methods contained in Condition 41.

Emission Unit Groupings

34. If the Permittee wishes to establish groupings or multiple groupings of emission units with a representative emission unit for each grouping, the Permittee shall accomplish the following:
 - 34.1 submit a request to the department, no later than three months prior to the required source testing under either Condition 32 or Condition 33. The request shall identify the requested groupings and their representative emission unit;
 - 34.2 submit a certification from a company official, with the request under Condition 34.1, that each grouping and representative emission unit:
 - a. have the same horsepower rating and engine model;
 - b. have an identical generator size that they are driving;
 - c. have the same configuration; and
 - 34.3 unless the department provides a written objection, within 30-days of receiving the request, the groupings are considered effective.
35. Emission Units 11 through 13 are established as a grouping as of the effective date of the CO PAL.
36. Emission Units 14 and 15 are established as a grouping as of the effective date of the CO PAL.
37. All emission units that are not contained in a grouping, established under either Condition 34, 35, or 36, shall be tested individually.

Calculation Methodology

38. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the CO emissions, for each emission unit subject to the CO PAL, for the previous calendar month, using Equation 2 and as follows:

Equation 2 $CO = EF \times kWh \left(\frac{1 \text{ ton}}{2000 \text{ lb}} \right)$

Where: CO = CO emissions in tons per month for all emission units
 kWh = a given emission units monthly kilowatt hours
 EF = Department approved emission factor as described in condition 39 through 41, 42.1c, 43 and 44 for a given emission unit

- 38.1 For each month during the first 12-months from the CO PAL effective date, add the previous calendar month CO emissions to the sum of the all previous months CO emissions from the CO PAL effective date. If the CO value calculated exceeds the CO limit contained in Condition 30, the Permittee shall report as a permit deviation per conditions 90 and 100.
- 38.2 For each month during the CO PAL effective period after the first 12-months of establishing the CO PAL, add the previous months CO emissions to the preceding

11-months NO_x emissions to get the rolling 12-month total. If the CO value calculated exceeds the CO limit contained in Condition 30, the Permittee shall report as a permit deviation per conditions 90 and 100.

CO Emission Factors

39. Until a unit-specific source test has been conducted in accordance with Condition 32 and approved in accordance with Condition 40, use the department approved CO emission factors contained in Table 3 to calculate CO emissions under Condition 38.
40. Within 90-days after completing the required validation source testing under Condition 32, the Permittee shall submit the resulting worst case CO emission factor for department approval.
 - 40.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
 - 40.2 If the emission factor is accepted, it shall:
 - a. rescind and replace the emission factor contained in Table 3; and
 - b. be used by the Permittee in the calculations required under Condition 38, to demonstrate compliance with the CO PAL for the full calendar month the approval is received in, forward.
 - 40.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the emission factor in Table 3 in the compliance demonstration calculations under Condition 38.
41. Within 90-days after completing a required re-validation source test under Condition 33, the Permittee shall submit the resulting worst case emission factor, obtained under Condition 33, for department approval.
 - 41.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
 - 41.2 If the emission factor obtained from source testing is accepted, it shall:
 - a. rescind and replace the CO emission factor that is currently in place to demonstrate compliance with the CO PAL;
 - b. be used by the Permittee to demonstrate compliance with the CO PAL under Condition 38 for the full calendar month of the approval forward; and
 - c. remain in effect until it is rescinded and replaced by a site specific CO emission factor that is established through source testing.
 - 41.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last department approved emission factor when performing the calculations under Condition 38, for the monthly compliance demonstration.

Table 3 – Department Approved CO Emission Factors

Emission Unit	Approved CO Emission Factor ^b (lbs/Kwh)
3 ^a	0.009
5 ^a	0.008
6 ^a	0.008
10 ^a	0.0048
11 ^a	0.0082
12 ^a	0.0082
13 ^a	0.0082
14 ^a	0.0011
15 ^a	0.0011

Table Notes:

a - Under authority of 40 CFR 52.21(aa)(7)(x) the Department may implement any requirements necessary to implement and enforce the PAL, thus source testing for all small emission units to verify the emission factor used to comply with the PAL.

b - Emission Factor in pounds per kilowatt hour shall be used to show compliance with the PAL

Emission Unit or Related Equipment Addition or Replacement Requirements

42. If the Permittee adds a new emission unit, replaces an emission unit, or replaces an emission unit's generator, the Permittee shall:
 - 42.1 notify the Department of the:
 - a. make, model and size of the new emission unit and of the emission unit being replaced or the new emission unit being added to the stationary source;
 - b. make, model and size of the new generator and the replaced equipment; and
 - c. emission factor for CO, in pounds per kilowatt hour for the new fuel burning equipment.
 - 42.2 use the emission factor provided under Condition 42.1c for the compliance demonstration calculation under Condition 38, until a new emission factor is obtained from source testing under Condition 43.
43. For all new emission units or replacement emission units the Permittee shall:
 - 43.1 source test each emission unit or a representative emission unit for a group of emission units established under Condition 34, within 90-days of initial startup of the emission unit or the first unit of a grouping;
 - 43.2 perform a source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis;

- 43.3 use methods contained in Section 13 to conduct the source test;
 - 43.4 use the results of the source test to revise the CO emission factor in lbs/kWh, used in Condition 38, by the methods contained in Condition 41; and
 - 43.5 perform subsequent ongoing validation source testing in accordance with Condition 33.
44. If the Permittee replaces a generator driven by an emissions unit subject to the CO PAL, the Permittee shall:
- 44.1 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case CO emissions, on a pound of CO per Kilowatt hour basis, on that emission unit within 90-days of restarting that emission unit.
 - 44.2 if a site specific source test is required for the generator replacement, the Permittee shall perform subsequent ongoing validation source testing in accordance with Condition 33.
 - 44.3 alternatively, if the replacement generator is the same make, model and rating, a site specific source test is not required.

Monitoring

- 45. For each emission unit that is subject to the CO PAL, the Permittee shall monitor the Kilowatt hours of electricity produced, with a meter accurate to within plus or minus one percent. This shall be accomplished monthly (calendar) for the full effective period of this CO PAL. The Kilowatt hours shall be read on the last day of each calendar month, and within 3 hours of the last day of the effective period of the PAL.
- 46. If there is a gap in the monitoring data collected for the Kilowatt hours produced for any emissions unit subject to the CO PAL, the Permittee shall report as a permit deviation per Conditions 90 and 100.

Recordkeeping

- 47. For each emission unit or group of emission units established under either Condition 34, 35, or 36 that are subject to the CO PAL, the Permittee shall retain records² of the monthly Kilowatt hours of electricity produced, for five calendar years beyond the effective period of this CO PAL.
- 48. The Permittee shall retain records of the monthly and 12-month rolling CO emissions calculated in Condition 38 for the full effective period of the CO PAL and for an additional five calendar years beyond the effective period of this CO PAL.
- 49. If there is a gap in the data records maintained by the Permittee for CO emissions or for the Kilowatt hours produced for any emissions unit, the Permittee shall report as a permit deviation per Conditions 90 and 100.

² The records may be maintained in electronic format

Reporting

50. The Permittee shall report the:
- 50.1 monthly and 12-month rolling Kilowatt hours produced, in the operating report required by Condition 101;
 - 50.2 monthly and 12-month rolling CO emissions calculated by Condition 38, in the operating report required by Condition 101; and
 - 50.3 results of all source testing and validation source testing within 60-days after the completion of such test or method.

General PAL Permit Terms and Conditions

51. The Permittee shall comply with Conditions 89 through 93.

Section 7 Particulate Matter - Aerodynamic Diameter of 10 Microns or Less (PM-10) PAL

PAL Limit

52. The Permittee shall limit the stationary source wide PM-10 emissions to less than 20.4 tons on a 12-month rolling average, rolled monthly.

Emissions from Startup, Shutdown and Malfunction

53. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the PM-10 PAL limit established in Condition 52. In addition to including the emissions in the calculations the Permittee shall:
- 53.1 record the date and duration of the deviation from normal operation; and
 - 53.2 report in the operating report, required by Condition 101, the date and duration of the deviation from normal operation.

Initial Emission Factor Validation Requirements

54. The Permittee shall:

54.1 for Emission Units 3 and 10:

- a. source test each emission unit subject to the PM-10 PAL or a representative emission unit for a group of emission units established under Condition 56, within six months of the effective date of the PM-10 PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;
- c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or
- d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the PM-10 PAL;

54.2 for Emission Units 5 and 6:

- a. source test each emission unit subject to the PM-10 PAL or a representative emission unit for a group of emission units established under Condition 56, within six months of the effective date of the PM-10 PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;
- c. if the emission unit is removed from operation, permanently, prior to the termination of the six month period, a source test is not required, or

- d. the Permittee may request written department approval to remove the source test requirements for these emission units. The Permittee shall only have this option if the emission unit is being subsequently removed from operation within a total of eight months of the effective date of the PM-10 PAL;

54.3 for Emission Units 11 through 13:

- a. source test Emission Unit 12, which is the representative emission unit for this test, within six months of the effective date of this PM-10 PAL;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;

54.4 for Emission Units 14 and 15:

- a. source test which ever emission unit begins operation first, within six months of the first time the emission unit operates. The emission unit tested shall be the representative emission unit for this source test;
- b. perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;

54.5 use methods contained in Section 13 to conduct the source test; and

54.6 use the results of the source test to revise the worst-case PM-10 emission factor in lbs/kWh, used in Condition 60 by the methods contained in Condition 62.

Ongoing Emission Factor Re-Validation Requirements

55. The Permittee shall:

55.1 source test each emission unit subject to the PM-10 PAL or a representative emission unit for a group of emission units established under Condition 56, 57, or 58, at least once every five years, from the last source test performed under this PM-10 PAL;

- a. for the grouping established under Condition 57, source test Emission Unit 13;
- b. for the grouping established under Condition 58, source test whichever emission unit that was not source test in the previous test, and this emission unit shall be the representative emission unit for this source test;

55.2 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;

55.3 use methods contained in Section 13 to conduct the source test; and

55.4 use the results of the source test to revise the PM-10 emission factor in lbs/kWh, used in Condition 60, by the methods contained in Condition 63.

Emission Unit Groupings

56. If the Permittee wishes to establish groupings or multiple groupings of emission units with a representative emission unit for each grouping, the Permittee shall accomplish the following:
- 56.1 submit a request to the department, no later than three months prior to the required source testing under either Condition 54 or Condition 55. The request shall identify the requested groupings and their representative emission unit;
 - 56.2 submit a certification from a company official, with the request under Condition 56.1, that each grouping and representative emission unit:
 - a. have the same horsepower rating and engine model;
 - b. have an identical generator size that they are driving;
 - c. have the same configuration; and
 - 56.3 unless the department provides a written objection, within 30-days of receiving the request, the groupings are considered effective.
57. Emission Units 11 through 13 are established as a grouping as of the effective date of the PAL.
58. Emission Units 14 and 15 are established as a grouping as of the effective date of the PAL.
59. All emission units that are not contained in a grouping, established under either Condition 56, 57, or 58, shall be tested individually.

Calculation Methodology

60. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the PM-10 emissions, for each emission unit subject to the PM-10 PAL, for the previous calendar month, using Equation 3 and as follows:

Equation 3 $NO_x = EF \times kWh \left(\frac{1 \text{ ton}}{2000 \text{ lb}} \right)$

Where: *PM-10* = PM-10 emissions in tons per month for all emission units

kW-h = a given emission units monthly kilowatt hours

EF = Department approved emission factor as described in condition 61 through 63, 64.1c, 65, and 66 for a given emission unit

- 60.1 For each month during the first 12-months from the PM-10 PAL effective date, add the previous calendar month PM-10 emissions to the sum of the all previous months PM-10 emissions from the PM-10 PAL effective date. If the PM-10 value calculated exceeds the PM-10 limit contained in Condition 52, the Permittee shall report as a permit deviation per conditions 90 and 100.

- 60.2 For each month during the PM-10 PAL effective period after the first 12-months of establishing the PM-10 PAL, add the previous months PM-10 emissions to the preceding 11-months PM-10 emissions to get the rolling 12-month total. If the PM-10 value calculated exceeds the PM-10 limit contained in Condition 52, the Permittee shall report as a permit deviation per conditions 90 and 100.

PM-10 Emission Factors

61. Until a unit-specific source test has been conducted in accordance with Condition 54 and approved in accordance with Condition 62, use the department approved PM-10 emission factors contained in Table 4 to calculate PM-10 emissions under Condition 60.
62. Within 90-days after completing the required validation source testing under Condition 54, the Permittee shall submit the resulting worst case PM-10 emission factor for department approval.
- 62.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
- 62.2 If the emission factor is accepted, it shall:
- a. rescind and replace the emission factor contained in Table 4; and
 - b. be used by the Permittee in the calculations required under Condition 60, to demonstrate compliance with the PM-10 PAL for the full calendar month the approval is received in, forward.
- 62.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the emission factor in Table 4 in the compliance demonstration calculations under Condition 60.
63. Within 90-days after completing a required re-validation source test under Condition 55, the Permittee shall submit the resulting worst case emission factor, obtained under Condition 55, for department approval.
- 63.1 If the department does not object, within 30-days of the departments receipt of the submittal, then the emission factor will be considered accepted.
- 63.2 If the emission factor obtained from source testing is accepted, it shall:
- a. rescind and replace the PM-10 emission factor that is currently in place to demonstrate compliance with the PM-10 PAL;
 - b. be used by the Permittee to demonstrate compliance with the PM-10 PAL under Condition 60 for the full calendar month of the approval forward; and
 - c. remain in effect until it is rescinded and replaced by a site specific PM-10 emission factor that is established through source testing.
- 63.3 If the department rejects the submitted emission factor, the department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last department approved emission factor when performing the calculations under Condition 60, for the monthly compliance demonstration.

Table 4 - Department Approved PM-10 Emission Factors

Emission Unit	Approved Emission Factor ^b (lbs/Kwh)
3 ^a	0.001
5 ^a	0.001
6 ^a	0.001
10 ^a	0.0005
11 ^a	0.0005
12 ^a	0.0005
13 ^a	0.0005
14 ^a	0.0001
15 ^a	0.0001

Table Notes:

a - Under authority of 40 CFR 52.21(aa)(7)(x) the Department may implement any requirements necessary to implement and enforce the PAL, thus source testing for all small emission units to verify the emission factor used to comply with the PAL.

b - Emission Factor in pounds per kilowatt hour shall be used to show compliance with the PAL

Emission Unit or Related Equipment Addition or Replacement Requirements

64. If the Permittee adds a new emission unit, replaces an emission unit, or replaces an emission unit's generator, the Permittee shall:

64.1 notify the Department of the:

- a. make, model and size of the new emission unit and of the emission unit being replaced or the new emission unit being added to the stationary source;
- b. make, model and size of the new generator and the replaced equipment; and
- c. emission factor for PM-10, in pounds per kilowatt hour for the new fuel burning equipment.

64.2 use the emission factor provided under Condition 64.1c for the compliance demonstration calculation under Condition 60, until a new emission factor is obtained from source testing under Condition 65.

65. For all new emission units or replacement emission units the Permittee shall:

- 65.1 source test each emission unit or a representative emission unit for a group of emission units established under Condition 56, within 90-days of initial startup of the emission unit or the first unit of a grouping;
- 65.2 perform a source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis;

- 65.3 use methods contained in Section 13 to conduct the source test;
 - 65.4 use the results of the source test to revise the PM-10 emission factor in lbs/kWh, used in Condition 60, by the methods contained in Condition 63; and
 - 65.5 perform subsequent ongoing validation source testing in accordance with Condition 55.
66. If the Permittee replaces a generator driven by an emissions unit subject to the PM-10 PAL, the Permittee shall:
- 66.1 perform the source tests at a minimum of four representative loads, with one of the loads being at the worst case PM-10 emissions, on a pound of PM-10 per Kilowatt hour basis, on that emission unit within 90-days of restarting that emission unit.
 - 66.2 if a site specific source test is required for the generator replacement, the Permittee shall perform subsequent ongoing validation source testing in accordance with Condition 55.
 - 66.3 alternatively, if the replacement generator is the same make, model and rating, a site specific source test is not required.

Monitoring

67. For each emission unit that is subject to the PM-10 PAL, the Permittee shall monitor the Kilowatt hours of electricity produced, with a meter accurate to within plus or minus one percent. This shall be accomplished monthly (calendar) for the full effective period of this PM-10 PAL. The Kilowatt hours shall be read on the last day of each calendar month, and within 3 hours of the last day of the effective period of the PAL.
68. If there is a gap in the monitoring data collected for the Kilowatt hours produced for any emissions unit subject to the PM-10 PAL, the Permittee shall report as a permit deviation per Conditions 90 and 100.

Recordkeeping

69. For each emission unit or group of emission units established under Condition 56, 57, or 58 that are subject to the PM-10 PAL, the Permittee shall retain records³ of the monthly Kilowatt hours of electricity produced, for five calendar years beyond the effective period of this PM-10 PAL.
70. The Permittee shall retain records of the monthly and 12-month rolling PM-10 emissions calculated in Condition 60 for the full effective period of the PM-10 PAL and for an additional five calendar years beyond the effective period of this PM-10 PAL.
71. If there is a gap in the data records maintained by the Permittee for PM-10 emissions or for the Kilowatt hours produced for any emissions unit, the Permittee shall report as a permit deviation per Conditions 90 and 100.

³ The records may be maintained in electronic format

Reporting

72. The Permittee shall report the:
- 72.1 monthly and 12-month rolling Kilowatt hours produced, in the operating report required by Condition 101;
 - 72.2 monthly and 12-month rolling PM-10 emissions calculated by Condition 60, in the operating report required by Condition 101; and
 - 72.3 results of all source testing and validation source testing within 60-days after the completion of such test or method.

General PAL Permit Terms and Conditions

73. The Permittee shall comply with Conditions 89 through 93.

Section 8 Sulfur Dioxide (SO₂) PAL

PAL Limit

74. The Permittee shall limit the stationary source wide SO₂ emissions to less than 67.8 tons on a 12-month rolling average, rolled monthly.

Emission Factors

75. The Permittee shall calculate the SO₂ using a mass balance, assuming 100 percent of the fuel oil based sulfur is converted into SO₂.

Emissions from Startup, Shutdown and Malfunction

76. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the SO₂ PAL limit established in Condition 74. In addition to including the emissions in the calculations the Permittee shall:
- 76.1 record the date and duration of the deviation from normal operation; and
 - 76.2 report in the operating report, required by Condition 101, the date and duration of the deviation from normal operation.

Calculation Methodology

77. The Permittee shall within 30 calendar days from the start of the first day of a calendar month, calculate the SO₂ emissions for each emission unit subject to the SO₂ PAL, for the previous calendar month, as follows:

Convert the sulfur percentage on a weight basis in the fuel to pounds of sulfur per gallon of fuel.

$$\text{Equation 4 } EFSO_2 = \left(\frac{lbSO_2}{Gallon(fuel)} \right) = \left(\frac{wt\%S}{100lb(fuel)} \right) \times \left(\frac{7.1lb}{Gallon(fuel)} \right) \times \left(\frac{2lbSO_2}{1lbS} \right)$$

Where: wt% S = Sulfur content of the fuel oil on a weight basis obtained by the methods in Condition 80.

$$\text{Equation 5 } SO_2 = EFSO_2 \times Gal \left(\frac{1 ton}{2000 lb} \right)$$

Where: SO₂ = SO₂ emissions in tons per month;

Gal = Gallons of fuel oil burned

EFSO₂ = Sulfur dioxide emission factor obtained by Equation 4 .

- 77.1 For each month during the first 12-months from the SO₂ PAL effective date, add the previous calendar month SO₂ emissions to the sum of the all previous months SO₂ emissions from the SO₂ PAL effective date. If the SO₂ value calculated exceeds the SO₂ limit contained in Condition 74, the Permittee shall report as permit deviation per conditions 90 and 100.

- 77.2 For each month during the SO₂ PAL effective period after the first 12-months of establishing the SO₂ PAL, add the previous months SO₂ emissions to the preceding 11-months SO₂ emissions to get the 12-month rolling average, rolled monthly. If the SO₂ value calculated exceeds the SO₂ limit contained in Condition 74, the Permittee shall report as permit deviation per conditions 90 and 100.

Emission Unit or Related Equipment Addition or Replacement Requirements

78. If the Permittee adds a new emission unit, replaces an emission unit, or replaces an emission unit's generator, the Permittee shall notify the Department of the:
- 78.1 make, model and size of the new emission unit and of the emission unit being replaced or the new emission unit being added to the stationary source; and
 - 78.2 the make, model and size of the new generator and the replaced equipment.

Monitoring

79. The Permittee shall:
- 79.1 accurately monitor the fuel oil consumption for all the emission units subject to the SO₂ PAL, by installing flow meters, with a minimum accuracy of plus or minus five percent.
 - 79.2 monitor and record the monthly fuel oil consumption, for all emission units contained in Table 1, their replacements and any additional emission units brought on to the stationary source from the issuance of this permit.
 - 79.3 record the fuel oil consumption on the last day of the calendar month for each month of the effective period of the SO₂ PAL.
 - 79.4 read and record the last fuel oil consumption reading under this SO₂ PAL, within 3 hours of the end of the day on the expiration date of the SO₂ PAL.
80. The Permittee shall:
- 80.1 within 30-days after the effective date of the SO₂ PAL, analyze a representative sample of the fuel oil in possession, in each tank, at the start of the SO₂ PAL, to determine the initial sulfur content using ASTM method D-129, D 4294, D-1266, D-1522, D-2622, D-4045⁴ or by an alternative method approved by the Department.
 - 80.2 report the initial fuel oil sulfur content results in the operating report required by Condition 101.
81. The Permittee shall:
- 81.1 obtain a statement or receipt from the fuel supplier certifying the maximum sulfur content (by weight) of the fuel oil for each shipment of fuel oil delivered to the stationary source. If a statement or receipt is not available from the supplier,

⁴ as adopted in 18 AAC 50.035, January 2007

analyze a representative sample of the fuel oil to determine the sulfur content using ASTM method D-129, D 4294, D-1266, D-1522, D-2622, D-4045 or an alternative method approved by the Department.

81.2 report the fuel sulfur content results determined in Conditions 82 through 84.

82. The Permittee shall for each new shipment of fuel oil received, estimate the amount of fuel oil remaining in each tank receiving a delivery and calculate the new fuel oil sulfur content for the tank, using the current fuel oil sulfur content of each tanks remaining fuel oil and the sulfur content and amount of the delivered fuel oil to that tank, by the following method;

82.1 the total quantity of fuel remaining in each tank shall be measured using a strapping tape;

82.2 the strapping tape shall be inserted into the tank and the level of the fuel oil in the tank be measured;

82.3 this length shall then be converted into the total gallons of fuel available based on information in the fuel tank strapping chart; and

82.4 for each fuel tank, the Permittee shall use the correct strapping chart for that tank.

83. The fuel oil sulfur content, on a percentage weight basis shall be used to calculate emissions and show compliance with the SO₂ PAL, as described in Condition 75.

84. The Permittee shall:

84.1 calculate the fuel sulfur content of the tank using 0.50 S wt%

- a. for the remaining tank sulfur content, if there is no record for the remaining fuel oil in the tank; or
- b. for the delivery content, if there is no record of fuel sulfur content for the delivered fuel oil; or
- c. for both, if there is a gap in fuel sulfur records for the delivered fuel oil and for the remaining fuel oil in the tank.

85. If the Permittee has no records for the fuel oil sulfur content of the fuel tank and if the permittee has not received any fuel shipments during the period of time missing data, then the Permittee may sample the fuel to obtain a sulfur content. The sulfur content shall be determined by using either ASTM method D-129, D 4294, D-1266, D-1522, D-2622, D-4045 or an alternative method approved by the Department.

86. The Permittee shall maintain records⁵ of the:

86.1 combined monthly and 12-month rolling gallons of fuel oil burned, for the full effective period of the SO₂ PAL plus an additional five calendar years beyond the effective period of this SO₂ PAL;

86.2 monthly and 12-month rolling SO₂ emissions calculated in Condition 77, for five calendar years beyond the effective period of this SO₂ PAL;

⁵ The records may be maintained in electronic format

- 86.3 monthly average of the fuel oil sulfur content of all storage tanks supplying fuel to the fuel burning equipment, for each month during the effective period of the SO₂ PAL; and
- 86.4 emissions calculations for showing compliance with the SO₂ PAL limit established in Condition 74, the Permittee shall include emissions from startup, shutdown and malfunctions.

Reporting

- 87. The Permittee shall report:
 - 87.1 monthly and 12-month rolling gallons of fuel oil burned, in the operating report required by Condition 101;
 - 87.2 monthly and 12-month rolling SO₂ emissions calculated by Condition 77, in the operating report required by Condition 101; and
 - 87.3 monthly fuel sulfur content of the fuel oil being burned, and any updated fuel sulfur content that occurred during the reporting period.
 - 87.4 any gap in the fuel sulfur monitoring, as a permit deviation per Conditions 90 and 100.
 - 87.5 If there is a gap in the data records maintained by the Permittee for SO₂ emissions or for the the sulfur content, the Permittee shall report as a permit deviation per conditions 90 and 100.

General PAL Terms

- 88. The Permittee shall comply with Conditions 89 through 93.

Section 9 General PAL Requirements

Semi-Annual Operating Report

89. In addition to any other information required by this permit, each semi-annual operating report required by Condition 101, shall also contain
 - 89.1 The identification of the owner, operator and permit number
 - 89.2 The total annual emissions in tons per year, on a rolling 12-month total for each month in the reporting period.
 - 89.3 All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
 - 89.4 A list of any emission units modified or added to the major stationary source during the preceding six month period.
 - 89.5 The number, duration and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective actions taken.
 - 89.6 A notification of shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emission units monitored by the system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided under 40 CFR 52.21(aa)(12)(vii).
 - 89.7 A certification meeting the requirements of 18 AAC 50.205.

Excess Emissions and Permit Deviation Reports

90. In addition to any other information required by this permit, each excess emissions and permit deviation report required by Condition 100, shall contain
 - 90.1 The identification of owner, operator and permit number
 - 90.2 The PAL requirement that experienced the deviation or that was exceeded.
 - 90.3 A signed statement by the responsible official (as determined by the applicable Title V operating permit program) certifying the truth, accuracy and completeness of the information provided in the report.

PAL Renewal

91. To request renewal of a PAL, the permittee must submit a timely application to the Department. A timely application is one that is submitted at least 6-months prior to, but not earlier than 18-months from, the date of the PAL expiration. If the Permittee submits a complete application to renew the PAL within this time period, then the PAL shall

continue to be effective until the revised permit with the renewed PAL is issued. The dates to submit a renewal application for each PAL are as follows:

- 91.1 To renew the NO_x PAL contained in Section 5, the Permittee shall submit an application no sooner than September 6, 2016, but no later than September 6, 2017.
- 91.2 To renew the CO PAL contained in Section 6, the Permittee shall submit an application no sooner than September 6, 2016, but no later than September 6, 2017.
- 91.3 To renew the PM-10 PAL contained in Section 7, the Permittee shall submit an application no sooner than September 6, 2016, but no later than September 6, 2017.
- 91.4 To renew the SO₂ PAL contained in Section 8, the Permittee shall submit an application no sooner than September 6, 2016, but no later than September 6, 2017.
- 91.5 The application to renew a PAL permit shall contain the information required in 40 CFR 52.21(AA)(10)(iii)(a) – (d).

PAL Expiration

- 92. Any PAL that is not renewed in accordance with Conditions 91 and 91.5 shall expire at the end of the PAL effective period, and the requirements in 40 CFR 52.21(aa)(9)(i) through (v) shall apply.

Increasing a PAL during the PAL effective period.

- 93. A PAL emission limitation may be increased during the the PAL effective period in accordance with the requirements of 40 CFR 52.21(aa)(11).

Section 10 Emission Fees

94. Assessable Emissions

94.1 The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year (tpy). The quantity for which fees will be assessed is the lesser of:

- a. the stationary source's assessable potential to emit of 613 tpy; or
- b. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by:
 - (i) an enforceable test method described in 18 AAC 50.220;
 - (ii) material balance calculations;
 - (iii) emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - (iv) other methods and calculations approved by the Department.

95. Assessable Emission Estimates.

95.1 Emission fees will be assessed as follows:

- a. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
- b. if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 94.1a.

Section 11 General Recordkeeping, Reporting, and Certification Requirements

96. **Certification.** The Permittee shall certify all reports, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
97. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 96.
98. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke, reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.
99. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
 - 99.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
 - 99.2 records of all monitoring required by this permit, and information about the monitoring including (if applicable):
 - a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
 - b. sampling dates and times of sampling or measurements;
 - c. the operating conditions that existed at the time of sampling or measurement;
 - d. the date analyses were performed;
 - e. the location where samples were taken;
 - f. the company or entity that performed the sampling and analyses;
 - g. the analytical techniques or methods used in the analyses; and
 - h. the results of the analyses

100. Excess Emissions and Permit Deviation Reports.

100.1 Except as provided in Condition 103, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that caused emissions in excess of a technology based emissions standard;
- c. report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which emissions or deviation occurs or is discovered, except as provided in Condition 100.1c(ii) and 100.1c(iii);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under 100.1c(i); and
 - (iii) for failure to monitor, as required in other applicable conditions of this permit.

100.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Attachment 2. The Permittee must provide all information called for by the form that is used.

100.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

101. Operating Reports. During the life of this permit, the Permittee shall submit to the Department an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year..

101.1 The operating report must include all information required to be in operating reports by other conditions of this permit

101.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under 101.1, either

- a. The Permittee shall identify
 - (i) the date of the deviation;
 - (ii) the equipment involved;
 - (iii) the permit condition affected;

- (iv) a description of the excess emissions or permit deviation; and
 - (v) any corrective action or preventative measures taken and the date of such actions; or
 - b. when excess emissions or permit deviations have already been reported under Condition 100 the Permittee may cite the date or dates of those reports.
- 102. The Permittee shall allow the Department or an inspector authorized by the Department upon presentation of credentials and at reasonable times with the consent of the owner or operator to
 - 102.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;
 - 102.2 have access to and copy any records required by this permit
 - 102.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
 - 102.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.
- 103. **Air Pollution Prohibited.** No person may permit any emissions which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.
 - 103.1 If emissions present a potential threat to health or safety, the Permittee shall report any such emissions according to Condition 100.
 - 103.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 103.
 - 103.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
 - a. after investigation because of complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 103; or
 - b. the Department notifies the Permittee that it has found a violation of Condition 103.
 - 103.4 The Permittee shall keep records of
 - a. the date and time, and nature of all emissions complaints received;
 - b. the name of the person or persons that complained, if known;
 - c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 103; and
 - d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

103.5 With each operating report under Condition 101, the Permittee shall include a brief summary report which must include

- a. the number of complaints received
- b. the number of times the Permittee or the Department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
- e. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

Section 12 Terms to Make Permit Enforceable

104. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 104.1 an enforcement action; or
 - 104.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
105. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
106. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
107. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
108. The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 13 General Source Test Requirements

109. **Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.
110. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing
- 110.1 at a point or points that characterize the actual discharge into the ambient air; and
 - 110.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.
111. **Reference Test Methods.** The Permittee shall use the following references for test methods when conducting source testing for compliance with this permit:
- 111.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 3 of this permit to record data.
 - 111.2 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.
 - 111.3 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.
 - 111.4 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.
112. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.
113. **Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete test plan at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.
114. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

115. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results as set out in Condition 96. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

Section 14 Permit Documentation

<u>Date</u>	<u>Document Details</u>
May 11, 2007	Application for Dillingham Power Plant Replacement Engine Project and establishing PALs received at ADEC.
December 27, 2007	Comments on the public draft version of the permit received from the Permittee

Attachment 1 Visible Emissions Form

Visible Emissions Field Data Sheet

Certified Observer: _____

Company &
Stationary Source: _____

Location: _____

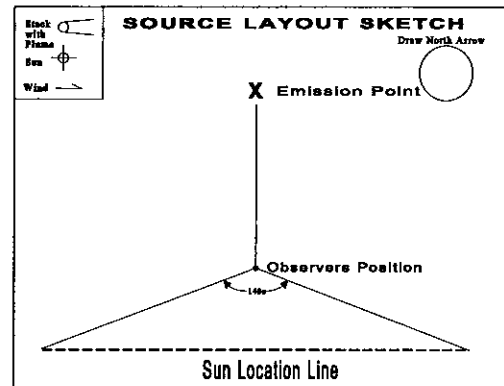
Test No.: _____ Date: _____

Source: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Page ____ of ____

Test Number _____ Clock time _____

[illegible]

Certified By and Date

In compliance with six-minute opacity limit? (Yes or No) _____

Set Number	Time Start—End	Opacity	
		Sum	Average

Attachment 2 ADEC Notification Form⁶

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

Stationary Source Name

Air Quality Permit Number

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: / / Time: :

When did the event/deviation?

Begin: Date: / / Time: : (please use 24hr clock)

End: Date: / / Time: : (please use 24hr clock)

What was the duration of the event/deviation: : (hrs:min) or days
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions Complete Section 1 and Certify

☐ Deviation from permit conditions complete Section 2 and certify

☐ Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

Section 1. Excess Emissions

(a) Was the exceedance ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up/Shut Down

☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure

☐ Scheduled Maintenance/Equipment Adjustments

☐ Bad fuel/coal/gas

☐ Upset Condition

☐ Other

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emission unit(s) Involved:

Identify the emission units involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

⁶ Revised as of December 6, 2004

<u>EU ID</u>	<u>Emission Unit Name</u>	<u>Permit Condition Exceeded/Limit/Potential Exceedance</u>

(e) Type of Incident (please check only one):

- | | | |
|--|--|---|
| <input type="checkbox"/> Opacity % | <input type="checkbox"/> Venting (gas/scf) | <input type="checkbox"/> Control Equipment Down |
| <input type="checkbox"/> Fugitive Emissions | <input type="checkbox"/> Emission Limit Exceeded | <input type="checkbox"/> Record Keeping Failure |
| <input type="checkbox"/> Marine Vessel Opacity | <input type="checkbox"/> Failure to monitor/report | <input type="checkbox"/> Flaring |
| <input type="checkbox"/> Other: | | |

(f) Unavoidable Emissions:

- Do you intend to assert that these excess emissions were unavoidable? ☐ YES ☐ NO
- Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ YES ☐ NO

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) Permit Deviation Type (check one only) (check boxes correspond with sections in permit)

- ☐ Emission Unit Specific
- ☐ General Source Test/Monitoring Requirements
- ☐ Recordkeeping/Reporting/Compliance Certification
- ☐ Standard Conditions Not Included in Permit
- ☐ Generally Applicable Requirements
- ☐ Reporting/Monitoring for Diesel Engines
- ☐ Insignificant Emission Unit
- ☐ Stationary Source-Wide
- ☐ Other Section: (title of section and section # of your permit)

(b) Emission unit(s) Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding Permit condition and the deviation.

<u>EU ID</u>	<u>Emission Unit Name</u>	<u>Permit Condition /Potential Deviation</u>

(c) Description of Potential Deviation: Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions: Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title _____ Date _____

Signature: _____ Phone number _____

To Submit this report:

Fax this form to: 907-451-2187

Or

Email to: airreports@dec.state.ak.us

if emailed, the report must be certified.

Or

Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

Phone notifications: 907-451-5173.

Phone notifications require written follow up report within the deadline listed in condition 24.

Or

Online submission of this report can be made at the following website (*Website is not yet available*). *If submitted online, the report must be certified.*

Signature: _____

